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The Relevance of Forming Students' Managerial Competencies Through Innovative Educational Methodology

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ABSTRACT

This article discusses the issue of innovation in education and also indicates the importance and timeliness of introducing innovations not only in the delivery of knowledge itself but also in technologies that facilitate the development of acquired knowledge. The article also updates the value of modern education in the context of the formation of a knowledge economy, which entails the relationship between quality education and employment structures.

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1. INTRODUCTION

At the present stage, the quality of education plays a vital role in the life of every person. Education predetermines not only the type of human activity itself but also shows his social status. In terms of obtaining an education, mastering management competencies plays a particularly important role: from a social point of view, such competencies allow you to conduct a constructive dialogue with others; on the economic side - make effective marketing, personnel, and financial decisions; in science – acquire theoretical, analytical and critical skills.As practice shows, for the productive acquisition of management competencies by modern students, it is necessary to use “maximally flexible” teaching methods. This is explained by the fact that the immediate theoretical and practical basis laid down in Uzbekistan science is constantly undergoing quantitative and qualitative changes. As a result, the innovative approach required by current education becomes relevant.

In Uzbekistan's scientific practice, there are quite a few definitions of the concept of “innovation”, but science has not yet developed a unified approach to it. Despite this, studying the interpretation of the concept of “innovation” by Western authors, S.V. Kostyukevich revealed that their approach to defining this concept is pragmatic and utilitarian: to acquire new knowledge and skills, it is necessary to be able to benefit from them (Latukha & Pushkarev, 2012). The introduction of innovations into the education system is necessary in the field of theory and practice of the modern knowledge transfer system. The improvement and process of training potential professional personnel occupies one of the main places in the development of modern Uzbekistan. As a result, effective communication of knowledge, development of the necessary skills in the practical part, as well as the ability to think quickly and objectively assess and solve problem situations are the primary signs of a person’s management competencies.

For a modern higher education institution, innovative products should be graduates with the required management competencies. Therefore, an innovative approach in education and, in particular, in the field of management competencies, means the advanced training of highly qualified personnel for various areas of professional activity, who can put their ideas into practice.

According to many experts, the introduction of an innovative approach to the management aspect of higher education is an urgent need. The following facts confirm several points (see http://cyberleninka.ru/article/n/osobennosti-innovatsionnoy-modeli-vysshego-obrazovaniya)

(i) Rapid obsolescence of knowledge;
(ii) Intensive informatization of society;
(iii) The need for active implementation of research results into the educational process.

The formation of innovative methods for mastering management competencies is a fairly significant process, including step-by-step basic training: starting with the theoretical and ending with the practical part (**Figure 1**). The essence of this technique is systemic. This means that each component of this technique is interconnected. In this regard, we will describe the main components:

(i) Development of the theoretical part of the educational methodology - it is focused on collecting relevant information from various areas of professional activity, contributing to the effective learning of students and their acquisition of management competencies. In this case, the key aspect is relevance, which predetermines the consideration of various changes (innovations) in the information educational environment.

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(ii) Resolution of organizational issues - a schedule of students' classes is drawn up. It is worth noting that to avoid information overload, the study schedule of students is taken into account. Thus, this allows you to work most constructively; absorb the information fully; and develop students' cognitive thinking.

Development of a methodology for developing management competencies. In this component, the creation of an optimal, from the point of view of perception, methodology for teaching management competencies occurs, as a result of the implementation of which students will be able to significantly increase the level of their knowledge both in theoretical and practical parts. Close attention should be paid to the very form of interaction between the teacher and students. In this educational methodology.

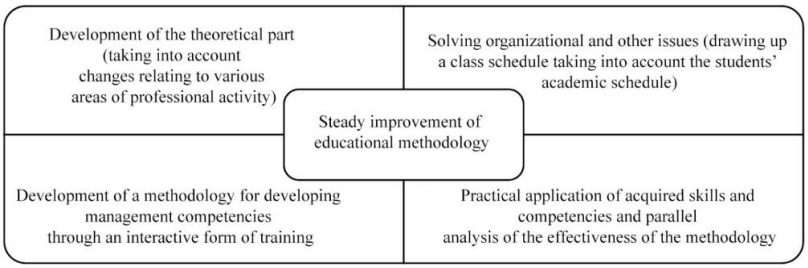

Figure 1. Innovative educational methodology for developing management competencies.

It is advisable to use an interactive form of training. Its advantage over the active and passive forms is that it is focused on the broader interaction of students not only with the teacher but also with each other and on the dominance of student activity in the learning process. This, of course, also contributes to the development of management competencies. The teacher, in turn, develops a lesson plan (usually these are interactive exercises and assignments, during which the student studies the material and interacts with the teacher and other students). After developing a lesson plan, the teacher's place in an interactive form is reduced to achieving the set goals of the lesson through active interaction with students (**Figure 2**).

Practical application of acquired skills and competencies by students. The essence of this application is the participation of students in various management cups/competitions, extracurricular internships, etc. It is worth noting that within the framework of the practical aspect, a multifactorial analysis of the influence of external and internal factors on the educational system is carried out. Such an analysis allows you to immediately make adjustments and direct students' activities in the "right direction", preventing knowledge from becoming outdated. As mentioned earlier, one of the key areas of activity in education is the creation of innovative educational methods, the main goal of which is the professional development of management competencies of subjects of a certain practice. In this regard, the introduction of new technologies into a certain segment of educational activity makes it possible to keep up with the times, directing them in the right direction.

Already today, integrated structures have been created in the country in which educational and scientific-innovative activities are combined. The key feature of these structures is the close connection between the theoretical and practical parts. One such structure is the All-Uzbek Management Cup "Manage!". First introduced in 2018, it is a project that identifies and assesses the management competencies and skills that all modern students should possess. The relevance and practical significance of the Cup lie in the process of making complex and balanced decisions to master practical skills in developing an enterprise strategy. This is a fairly important factor directly related to the quality of the developed teaching methodology.

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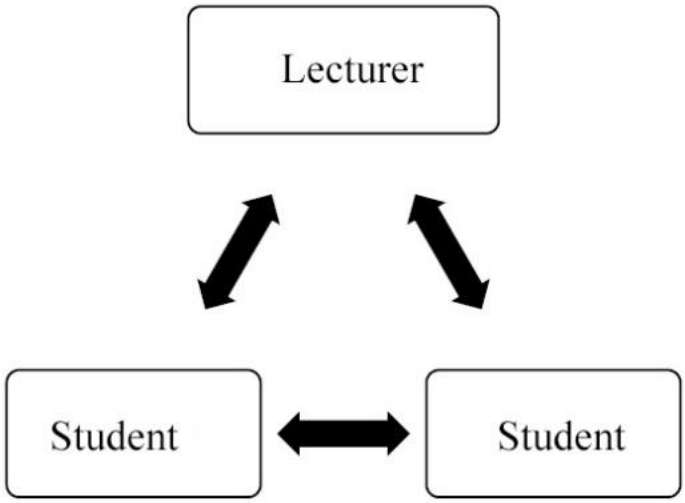

Figure 2. Scheme of interaction between teacher and students in an interactive form of learning.

Looking at this project in more detail, we can say that in the Cup, teams of participants are given control of virtual companies with the same starting indicators. After analyzing the situation in the market, students develop a strategy and a set of management decisions for its implementation in direct competition with each other in a simulated economy and markets. It is worth noting that a limited amount of time is allotted for making a decision for each stage, which significantly complicates the task and increases the level of management competencies of Cup participants. As a result, based on the results of each stage, an overall rating of students is formed based on a unified assessment methodology.

The essence of the prospect of this Project is that it is implemented within the framework of an interactive form of education: - interaction and competition among students are always relevant; - the process of studying the game model is interactive (i.e. there is a new way of communicative interaction, achieved with the help of modern IT technologies). For example, in the aspect of interactivity, there is an active study of the patterns of functioning of an automated game simulator. It determines the performance of participants and is based on the strict laws of market relations.

As a result, its presence is updated due to the development of non-standard cognitive thinking of students under time pressure, which is a positive point. As a result of participation in this Cup, students' attitudes are characterized by positive dynamics:

(i) The boundaries of their thinking expand;
(ii) Analytical skills develop;
(iii) A practice-oriented approach is being formed;
(iv) The level of financial literacy increases, etc.

Of course, the skills acquired as a result of participation in the Cup will help students in any sphere of life, which confirms the feasibility of introducing innovative educational methods for developing management competencies (**Figure 3**).

In addition to personal attitudes, the acquired and existing skills of students are also assessed by experts, who are representatives of the largest companies in Uzbekistan, winners of the Cup of previous years, etc. The advantage of having an expert is that any student can demonstrate their management competencies and, as a result, these skills will be appreciated. This fact is reflected in the innovative educational methodology we propose: practical assessment of the students being trained will allow us to assess the quality of the education being taught and make innovations based on multifactor analysis.

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To summarize what has been said, the stage-by-stage structure of participation in the Cup is as follows:

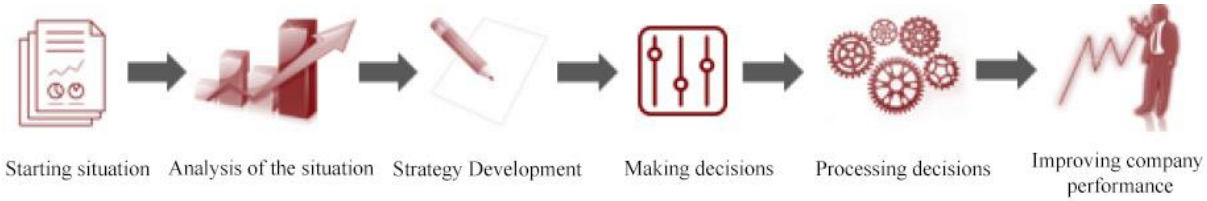

Figure 3. Stage-by-stage structure of participation in the "Manage" Cup (Kostyukevich, 2011).

It is worth noting that the expert assessment is significant. This is because by constructively demonstrating their management competencies, students can earn the attention of experts and, as a result, receive rewards for this. For example, the reward could be an internship in a large Uzbek (international) company, a grant for master's studies with a nominal value of 500,000 rubles, and many other valuable prizes. This is certainly a motivation for students to learn and improve their skills at various levels.

In general, participation in the Cup requires participants not only to know and understand the main economic indicators of the enterprise, but also the ability to operate with them, integrate them into logical schemes, and the ability to quickly calculate the enterprise development strategy, which is necessary for specialists in everyday life. Therefore, the use of the so-called "championship training", which underlies the innovative educational methodology we propose, based on the large-scale use of digital data sets, is quite relevant at the moment, which is confirmed by the active development of the "Manage!" Management Cup project. in the Republic of Uzbekistan (Kostyukevich, 2011).

2. LITERATURE REVIEW

In contemporary educational landscapes, the development of managerial competencies among students is gaining prominence, driven by the dynamic and complex nature of the business environment. This literature review explores the relevance of forming students' managerial competencies through innovative educational methodologies, acknowledging the imperative for graduates to possess a diverse skill set to thrive in the modern workplace.

Adams (2017) argues that traditional management education needs reevaluation to meet the demands of the digital era. The study explores the necessity of integrating innovative methodologies to foster managerial competencies aligned with industry needs. Smith and Brown (2019) examine the impact of experiential learning on managerial competencies. Their findings highlight the effectiveness of hands-on experiences in developing practical skills essential for managerial roles. Chang and Liu (2020) conducted a comprehensive review of the literature on integrating technology in management education.

The study explores how technological innovations contribute to the enhancement of managerial competencies. This study by Johnson and Smith (2018) investigated the impact of gamification in management education. The findings suggest that incorporating game elements enhances student engagement and facilitates the development of managerial competencies. Brown and Davis explore the strategic use of case studies in management education. Their research underscores the role of real-world scenarios in cultivating critical thinking and decision-making skills among students.

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3. METHOD AND MATERIAL

The study aimed to investigate the opinions of heads of educational organizations regarding the structure of innovative competence in modern leadership. The focus was on understanding the extent to which managerial activities in the education sector influence the requirements for specific professional competencies and the imperative for possessing innovative competence.

3.1. Participants

The survey involved 130 participants (68.4% of all study participants in the 2015/2016 academic year) enrolled in the program "Advanced Training of Managerial Personnel in the Education Sector of the Siberian Federal District." Participants had managerial experience ranging from 5 to 15 years or more in 92% of cases, with novice managers (up to 5 years of experience) comprising 8% of the sample.

3.2. Procedure

Participants were presented with a list of innovative competencies related to a leader's personality. They were required to assess the level of development these competencies should have in a modern manager (3 points - fully developed; 2 points - partially developed; 1 point - not developed). Additionally, participants provided a self-assessment of the degree of development of these competencies within themselves (3 points - fully developed; 2 points - partially developed; 1 point - not developed).

3.3. Material

The material for analysis included the responses of 130 participants, charting the assessment of innovative competencies for an ideal leader, and the self-assessment of these competencies among the respondents. The results were represented graphically, with a blue line indicating the ideal leader's competencies (row 1) and a red line representing the competencies currently developed by the respondents (row 2). The diagram focused on ratings of three points given by respondents for both the model of an innovative leader (blue color) and an actual leader (red color).

4. RESULTS AND DISCUSSION

Briefly dwell on the issue of representativeness by studying the opinions of heads of educational organizations about the structure of the innovative competence of a modern innovator leader. To what extent does the management activity of a modern leader in the field of education shape the requirements for the presence of certain professional competencies, as well as the need to possess innovative competence?

Numerous theoretical and methodological discussions by various authors on the problem of the content of the professional activity of the head of an educational organization come down to two main points of view. Most researchers predominate a psychological and pedagogical approach to determining the competencies of a leader, which emphasizes that a leader is, first of all, a teacher, a master teacher, a methodologist, who has authority among teachers only on the pedagogical path. At the same time, she adheres to the opinion of a few authors that “our new school” will be created not just by a leader who is a “master teacher”, a teacher, but by a leader who at the same time understands the financial sector, team management, and conflicts (Johnson & Smith. 2018). A modern leader must ensure the

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advanced, innovative nature of education, set tasks that are important today and will become even more important tomorrow, and find ways to solve them (Johnson & Smith. 2018).

The author also relies on the opinion who believes that the position of head of an educational organization obliges him to think strategically, be far-sighted, and work to create a perfect management system. This assumes that the heads of an educational institution should be "professional and skillful innovative managers" (Latukha & Pushkarev, 2012).

Thus, all of the above suggests that managers of all spheres of activity, including heads of educational organizations, in modern socio-economic conditions, responding to the challenges of the time, must, along with professional competence, also have innovative competence -ness. During the survey, 68.4% of all study participants in the 2015/2016 academic year students of the program "Advanced Training of Managerial Personnel in the Education Sector of the Siberian Federal District" were interviewed. The study respondents had management experience from 5 years to 15 or more years in 92% of cases, and novice managers with up to 5 years of experience were 8%. Thus, they could adequately assess both the need for innovative competencies in a modern leader and the degree of their development in themselves, acting as experts.

Listeners were offered a list of innovative competencies of a leader's personality. Respondents had to assess what innovative competencies should be developed in a modern manager (3 points - the competence must be fully developed; 2 points - the competence may not be fully developed; 1 point - the competence may be not developed). The second assessment concerned the degree of development of this competence at this stage among the respondent himself (3 points - the competence is fully developed; 2 points - the competence is not fully developed; 1 point - the competence is not developed).

In **Figure 4**, the blue line highlights the ratings of clusters of innovative competencies that should be developed in an innovative leader (row 1), while the red line represents the clusters of innovative competencies currently developed by the respondents (row 2). Additionally, in this case, only the ratings of three points given by respondents for the model of an innovative leader (blue color) and an actual leader (red color) are presented in the figure. The percentages indicate the number of respondents who rated each cluster as 3 points.

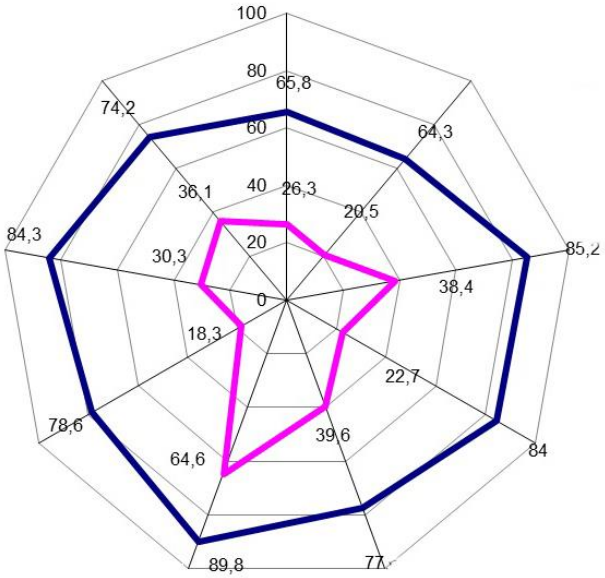

Figure 4. Results of assessing the development of clusters of innovative competencies of the personality of an ideal leader and self-assessment of the development of clusters of innovative competencies among respondents (for a real leader).

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In essence, the results of the diagram provide an assessment of respondents' perceptions of the ideal innovative leader and the current state of development of their innovative competencies. According to the diagram, most leaders believe that all clusters of innovative competencies must be fully developed in the ideal contemporary leader (rated at 3 points!). Thus, respondents, acting as experts, created a model of innovative competencies for the ideal innovative leader – represented by the outer circle in the diagram, marked in blue.

It is noteworthy that the results reveal a significant disparity between the perceived importance by leaders of the mandatory development of almost every cluster of innovative competencies in the ideal and the actual contemporary leader (differences ranging from two to four times!). An absolute "failure" is observed in the development of competencies such as the ability to integrate business strategy with the innovation process (– 62.1%), risk-taking and risk management (– 60.3%), identifying new connections (– 43.8%), and managing innovative projects (– 54.0%) among the respondents (**Table 1**).

The analysis of the need for the development of innovative competencies in contemporary leaders has enabled the construction of a model of innovative competencies for the ideal innovative leader (see **Figure 4**). This model is not only utilized by the author in further research but also serves as a reflective and evaluative procedure in training leaders and future HR managers (Gupta & Nguyen, 2017). During the research, it was also necessary to determine whether the clusters of innovative competencies listed correspond to the competencies outlined in the federal state educational standards for higher professional and higher education (FSES HPE and FSES HE) in the fields of "Personnel Management." Additionally, the study aimed to ascertain the applicability of this set of innovative competencies for use in the training of future HR managers, guiding them towards innovative activities amidst socio-economic changes. Over six years of implementing the discipline, a variety of innovative projects have been developed, spanning key domains such as instrument engineering, novel technical devices, advanced materials processing technologies, new materials, software products, innovative food production technologies and formulations, innovative tools, instruments, and equipment. The statistical distribution of projects across these domains is illustrated in **Figure 1**. As evident from **Figure 1**, projects predominantly center around the development of innovative products and technologies, as well as innovations in instrument engineering. Illustrative examples of projects falling under the category of "Innovative Products" include energy-efficient LED streetlights with enhanced operational characteristics, secure road barriers, a modular-type quadcopter, electronically tintable car windows based on synthetic opal electronic film, intelligent irrigation systems for backyard plots, a versatile modular robotic device, a magnetic power trainer, among others.

In the realm of "Innovative Equipment," projects have been devised such as the production of solar elements using gas-jet methods, a smart lighting control system for residential and industrial spaces, autonomous energy systems based on wind and diesel generators, a remotely controllable heating system for private sectors, and a fully operational asphalt paver, among others. The direction of "Instrument Engineering" is exemplified by projects including tubular microelectrodes for measuring cell membrane potential, the development and organization of manufacturing contemporary individual transportation means (wheelchairs), and biosensors for instantaneous analysis of biological fluids, among others.

5. CONCLUSION

In conclusion, this study delved into the crucial issue of understanding the innovative competencies required for effective leadership in the field of education. By surveying 130 participants enrolled in the "Advanced Training of Managerial Personnel in the Education

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Sector of the Siberian Federal District" program, the research aimed to capture the perspectives of heads of educational organizations on the structure of innovative competence.

The results presented in **Figure 1** revealed intriguing insights into the perceived importance and current state of development of innovative competencies among the respondents. The blue line, representing the ideal leader's competencies, emphasized the unanimous belief among participants that all clusters of innovative competencies should be fully developed in the contemporary leader. This idealized perception formed the basis for constructing a model of innovative competencies for the ideal innovative leader, indicating the participants' aspirations for comprehensive and advanced leadership skills.

However, the red line, depicting the current state of development of these competencies among the respondents, revealed a significant gap. Notably, there was a substantial difference between the perceived importance of the mandatory development of innovative competencies in the ideal leader and the reality of the contemporary leader. This disparity, ranging from two to four times in certain clusters, highlighted specific areas where participants acknowledged a lack of development, including integrating business strategy with the innovation process, risk-taking, identifying new connections, and managing innovative projects.

The findings underscore the importance of bridging this gap and enhancing the development of innovative competencies among educational leaders. The study not only contributes to the theoretical and methodological discussions on the competencies of educational leaders but also provides practical implications for leadership training programs.

Furthermore, the examination of innovative projects implemented over six years demonstrated the practical application of innovative competencies across various domains, reinforcing the relevance and impact of these competencies in real-world educational settings. The study also considered the alignment of identified innovative competencies with federal state educational standards, ensuring their applicability for training future HR managers amidst socio-economic changes.

In essence, the research sheds light on the evolving landscape of leadership in education, emphasizing the imperative for leaders to not only possess professional competence but also innovative competence. The identified disparities serve as a call to action for educational institutions and training programs to prioritize the development of innovative competencies, fostering leaders capable of navigating the challenges of modern educational environments

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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